OSWER Innovations Pilot

Expanding Pharmaceutical Waste Management in Hospitals

The Office of Solid Waste and Emergency Response (OSWER) initiated a series of innovative pilots to test new ideas and strategies for environmental and public health protection. A small amount of money is set aside to fund creative approaches to waste minimization, energy recovery, recycling, land revitalization, and homeland security that may be replicated across various sectors, industries, communities, and regions. We hope these pilots will pave the way for programmatic and policy recommendations by demonstrating the environmental and economic benefits of creative, innovative approaches to the difficult environmental challenges we face today.

BACKGROUND

Pharmaceuticals are increasingly recognized as a source of environmental contamination. Pharmaceuticals have been found in sanitary sewer systems, water bodies, medical waste incinerators, and landfills. The development of new pharmaceuticals is quickly outpacing the development of regulations and best management practices. Hospitals, as large users of pharmaceuticals, would benefit from best management practices to ensure treatment and disposal that minimizes environmental harm.

The U.S. EPA and American Hospital Association (AHA), recognizing that hospitals generate large and diverse waste streams, have set goals for the healthcare sector of eliminating mercury and reducing waste. With assistance from Hospitals for a Healthy Environment (H2E), the industry has made progress towards these goals. This pilot will extend the sector's progress into pharmaceutical waste management.

PILOT APPROACH

Health Care Without Harm, a sponsor of H2E, will partner with the U.S. EPA Region 1, the Dartmouth-Hitchcock Medical Center, the New Hampshire Department of Environmental Services, the New Hampshire Hospital Association, and the H2E Champions PharmEcology Associates to develop and pioneer pharmaceutical management techniques that ensure regulatory compliance and demonstrate the efficacy of best management practices. Baseline data on costs and quantities of end-of-life pharmaceuticals will be compiled and evaluated. This information will be used to assess what pharmaceuticals are being disposed of, why they are being wasted, and how waste can be minimized. Based on the results of the baseline assessment, the pilot will develop best management practices incorporating waste reduction activities. Waste management information will be integrated into the Center's pharmacy dispensing system and the pilot will provide training on the new pharmaceutical management system. Data will be collected on a regular basis and compared to the baseline to determine changes in quantity disposed, cost of disposal, and the need for waste minimization practices. The pilot will develop a blueprint for implementation that can be replicated in healthcare organizations nationwide. The pilot results will be disseminated nationally through H2E's extensive network of hospitals and training.

INNOVATION

Pharmaceutical waste minimization and management is the next frontier in environmental management for healthcare facilities. This project breaks new ground by taking a systematic approach to looking at how pharmaceutical wastes are generated, how they can be minimized, and how they should be managed in order to develop best management practices and regulatory compliance for pharmaceuticals. It will move the healthcare sector towards institutionalizing waste minimization.

BENEFITS

This pilot addresses one of the more difficult and pressing environmental challenges facing the healthcare sector. It will provide technical assistance and measurable results, not presently available, to hospitals. Individual hospitals will not have to reinvent the wheel, as results will be disseminated through H2E's extensive network and a national workshop. The variability of pharmaceutical waste generation scenarios among healthcare organizations is relatively small, enabling the results to be replicated in facilities across the country. Reducing pharmaceutical generation and implementing proper waste management system will benefit patients, staff, visitors, and the surrounding communities by improving environmental performance in the healthcare sector.

CONTACTS

Peggy Bagnoli, EPA Region 1, (617) 918-1828

For additional information, visit the EPA OSWER Innovations web site at: www.epa.gov/oswer/iwg.

Solid Waste
and Emergency
Response (5101T)

EPA 500-F-04-003
March 2004
www.epa.gov/oswer/